

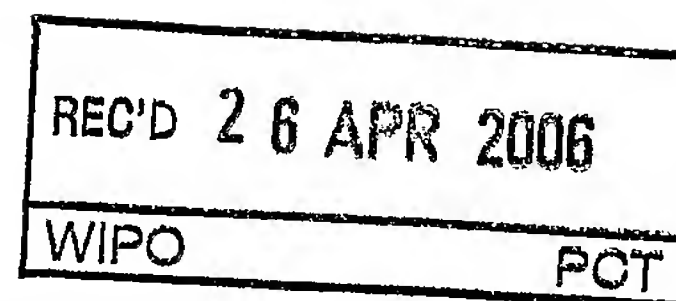
PATENT COOPERATION TREATY


PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference YCJ0136	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/GB2005/000425	International filing date (day/month/year) 07.02.2005	Priority date (day/month/year) 07.02.2004
International Patent Classification (IPC) or national classification and IPC INV. A01N65/00		
Applicant PHARMING LTD. et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 02.12.2005	Date of completion of this report 26.04.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer Fort, M Telephone No. +31 70 340-4123	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2005/000425

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-20 as originally filed

Claims, Numbers

1-37 received on 08.12.2005 with letter of 02.12.2005

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2005/000425

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-37
	No: Claims	
Inventive step (IS)	Yes: Claims	1-37
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-37
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/GB2005/000425

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following document:

D1: DATABASE WPI Section Ch, Week 200148 Derwent Publications Ltd., London, GB;
Class B04, AN 2001-445565 XP002333465 & JP 2001 122717 A (KINOKEN
SANGYO KK) 8 May 2001 (2001-05-08)

The document D1 discloses an anthelmintic composition comprising as active ingredient pumpkin seeds, cassia, Curcuma zedeoria, loquat leaf and/or area nut. The subject-matter of claims 1-37 differs from the teaching of D1 in the use of loquat kernel instead of loquat leaf.

The subject-matter of claims 1-37 is therefore new (Article 33(2) PCT).

Given the teaching of D1, the problem underlying the present invention may be seen as that of providing alternative compositions for combatting nematodes.

The solution proposed in the present invention, that is the use of loquat kernel can be considered as being inventive vis-à-vis D1 for the following reasons:

pumpkin seeds and cassia appear to be essential components in the anthelmintic composition described in D1. Moreover, from the results of the experiments provided with the letter of 02 December 2005, it is clear that loquat kernels are considerably more effective against nematodes than loquat leaves although both leaves and kernel contain laetrile/amygdalin. Since the technical benefit obtained with loquat kernels could not be expected, the subject-matter of claims 1-37 can be considered as being inventive (Article 33 (3) PCT).

The subject-matter of claims 1-37 is considered to be industrially applicable and the present application is therefore considered to satisfy the criterion set forth in Article 33(4) PCT.

CLAIMS

1. The use of loquat kernel to kill, inactivate or repel ^{nematodes} ~~pests~~.
- 5 ~~2.~~ Use according to Claim 1 wherein the use is as a pesticide.
- ~~3.~~ Use according to Claim 1 wherein the use is to kill, inactivate or
~~repel nematodes.~~
- 10 ² ~~4.~~ Use according to Claim ¹ ~~3~~, wherein the use is as a nematicide.
- ³ ~~5.~~ Use according to Claim ¹ ~~3~~ or Claim ² ~~4~~, wherein the use is against
plant parasitic nematodes.
- 15 ⁴ ~~6.~~ Use according to Claim ³ ~~5~~, wherein the use is as a selective
nematicide for plant parasitic nematodes.
- ⁵ ~~7.~~ Use according to any one of Claims ¹ ~~3~~ to ⁴ ~~6~~, wherein the use is as a
selective treatment for nematodes over fungi.
- 20 ⁶ ~~8.~~ Use according to any one of the preceding claims wherein the
loquat kernel is used in ground, chopped, freeze dried or spray dried
form or in the form of an extract.
- 25 ⁷ ~~9.~~ Use according to Claim ⁶ ~~8~~, wherein the kernel is used in the form
of an extract in water.
- ⁸ ~~10.~~ Use according to Claim ⁶ ~~8~~, wherein the kernel is used in the form
of an extract in an organic solvent.
- 30 ⁷ ~~11.~~ Use according to Claim ⁸ ~~10~~, wherein the solvent is ethanol.

- ¹⁰
12. Use according to any one of the preceding claims, wherein all soluble components from the loquat kernel are used.
- ¹¹
5 ~~13~~. Use according to any one of the preceding claims, wherein all water-soluble components from the loquat kernel are used.
- ¹²
~~14~~. Use according to any one of the preceding claims, wherein all organic solvent-soluble components from the loquat kernel are used.
- 10 ¹³
~~15~~. Use according to any one of the preceding claims, wherein all ethanol-soluble components from the loquat kernel are used.
- ¹⁴ ⁶
15 ~~16~~. Use according to Claim ~~8~~, wherein the loquat kernel is in ground form.
- ¹⁵ ¹⁴
~~17~~. Use according to Claim ~~16~~, wherein the kernel has been ground so as to pass through a 5mm sieve but such that 50% or more of the ground kernel would not pass through a 0.1mm sieve.
- 20 ¹⁶
~~18~~. A method of killing, inactivating or repelling nematodes, which method comprises providing loquat kernel and applying the loquat kernel to the nematodes or to an area where the nematodes are likely to exist or to an area to where the nematodes are expected to move.
- 25 ¹⁷ ¹⁶
~~19~~. The method of Claim ~~18~~ wherein the method comprises providing the loquat kernel in ground, chopped, freeze dried or spray dried form or in the form of an extract.
- ¹⁸ ¹⁷
30 ~~20~~. The method of Claim ~~19~~, wherein the method comprises the kernel in the form of an extract in water.

- ¹⁹
~~21~~. The method of Claim ¹⁷~~19~~, wherein the method comprises the kernel in the form of an extract in an organic solvent.
- 5 ²⁰
~~22~~. The method according to Claim ¹⁹~~21~~, wherein the solvent is ethanol.
- ²¹
~~23~~. The method according to any one of Claims ¹⁶~~18~~ to ²⁰~~22~~, wherein all soluble components from the loquat kernel are provided.
- 10 ²²
~~24~~. The method of Claim ¹⁷~~19~~ wherein the loquat kernel is provided in ground form.
- ²³
~~25~~. The method of any one of Claims ¹⁶~~18~~ to ²²~~24~~ wherein the nematodes are plant parasitic nematodes.
- 15 ²⁴
~~26~~. The method of Claim ²³~~25~~ wherein the nematodes are root knot nematodes.
- ²⁵
~~27~~. The method of any one of Claims ¹⁶~~18~~ to ²⁴~~26~~ wherein the method
20 comprises applying loquat kernel to a growing medium in an area where nematodes are believed to exist or to a growing medium in an area to where nematodes are expected to move.
- ²⁶
~~28~~. The method of Claim ²⁵~~27~~ wherein the loquat kernel is applied to or
25 mixed with a growing medium that is to have plants planted in it or is applied to or mixed with a growing medium that has plants planted in it.
- ²⁷ *nematode*
~~29~~. A ~~pesticide~~ comprising loquat kernel and a pesticidally acceptable solvent, carrier, excipient or diluent.

- 28
30. The ^{nematocide} ~~pesticide~~ of Claim ²⁷ 24, which comprises all soluble components of loquat kernel.
- 29
31. The ^{nematocide} ~~pesticide~~ of Claim ²⁷ 29, which comprises all water-soluble
5 components of loquat kernel.
- 30
32. The ^{nematocide} ~~pesticide~~ of Claim ²⁷ 29, which comprises all ethanol-soluble components of loquat kernel.
- 10 31
33. The ^{nematocide} ~~pesticide~~ of any one of Claims ²⁷ 29 to ³⁰ 32, which comprises 10g/l of loquat kernel or more.
- 32
34. The ^{nematocide} ~~pesticide~~ of any one of Claims ²⁷ 29 to ³¹ 33 wherein the pesticide
15 comprises loquat kernel in ground, chopped, freeze dried or spray dried form or in the form of an extract.
- 33
35. A method of producing a ^{nematocide} ~~pesticide~~, which method comprises providing ground, chopped, freeze dried or spray dried loquat kernel.
- 20 34
36. The method of Claim ³³ 35, which comprises providing ground loquat kernel.
- 35
37. The method of Claim ³⁴ 36, which further comprises taking extracts of the ground loquat kernel.
- 25 36
38. The method of Claim ³⁵ 37, wherein the extract is in water.
- 37
39. The method of Claim ³⁵ 37, wherein the extract is in ethanol.